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ABSTRACT

There has been much discussion recently of the effect that gender and learning style have on student performance. Educators have attempted to develop new teaching and assessment strategies that accommodate a variety of learning styles, and both males and females are becoming more aware of gender-related traits and their relationship to classroom dynamics. The objectives of this workshop were as follows: (1) to engage participants in a problem solving activity that requires group cooperation, (2) to discuss how gender and group dynamics affect successful problem solving in this activity, and (3) to share methods and ideas that enable students to explore their own learning styles in an effort to develop productive learning strategies. Class time spent discussing gender roles, group dynamics, and personal learning styles early in the school year can help students build effective group-work skills and productive learning strategies that will benefit them throughout their lives. Furthermore, for the teacher, creating a "profile" of the learning styles that students bring to class can facilitate the development of instructional methods that better meet the needs of each student. (JRH)

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# Gender and Group Dynamics

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OBJECTIVES:

- To engage participants in a problem solving activity that requires group cooperation
- To discuss how gender and group dynamics affect successful problem solving in this activity
- To share methods and ideas that enable students to explore their own learning styles, in an effort to develop productive learning strategies.

INTRODUCTION

There has been much discussion recently of the effect that gender and learning style have on student performance. Educators have attempted to develop new teaching and assessment strategies that accommodate a variety of learning styles, and both males and females are becoming more aware of gender-related traits and their relationship to classroom dynamics. We propose that students are both capable of understanding and interested in exploring their own learning styles. Class time spent discussing gender roles, group dynamics and personal learning styles early in the school year can help students build effective group-work skills and productive learning strategies that will benefit them throughout their lives. Furthermore, for the teacher, creating a "profile" of the learning styles that students bring to class can facilitate the development of instructional methods that better meet the needs of each student.

METHOD

1. Present a problem to be solved. The problem should be constructed so that students MUST work together to reach a solution, but it is not necessary for the entire class to work together as one group. Two or three smaller groups (depending on class size) work equally well. We suggest the following relatively simple task. Materials described are adequate for a class of up to 25 students. For larger classes, one more set of materials may be helpful.

MATERIALS: 2 large containers (eg., empty 4 L bottles)
2 100 ml graduated cylinders
2 small beakers (150 ml)
2 droppers
sink (for water supply)

Place all materials in a central location and write the following problem statement on the blackboard:

PROBLEM: Use the materials supplied to determine how many drops of water are necessary to fill the large container. When you are finished, the entire class will hand in ONE piece of paper containing the following:

I. a description of the procedure used to solve this problem
II. all relevant calculations
III. the answer you have arrived at
IV. the signatures of ALL members of the class, signifying that everyone agrees with the answer as written

Ask if there are any questions. Avoid clarifying the instructions unless absolutely necessary, and do not offer any advice about HOW the problem should be solved. Stand back and let the students wrestle with the problem for as long as necessary. Younger students may require an entire class period, while older students may finish in 20 minutes. When the

students have completed the activity, collect the write up and be sure that everyone has signed it, but do NOT tell them a "right" answer.

For homework following this activity (or during the next class meeting), have students process the experience by completing the following statements IN WRITING:

- Groups are successful when...
- Groups tend to fail when...
- An individual working in a group feels a part of the group when...
- An individual working in a group feels left out when...
- What are some *personal* characteristics that make an individual a good group member?
- What are some *personal* characteristics that make an individual a poor group member?

Spend some time discussing students responses to these questions in class. Then broaden this discussion to include gender roles. Ask the boys to listen quietly (and carefully) while the girls reflect on what they specifically liked and disliked about working with the boys. Then ask the girls to listen quietly (and carefully) while the boys reflect on what they specifically liked and disliked about working with the girls. Comments should not be directed at any one individual in particular, but rather at the "other gender" as a whole. Do not allow this discussion to become combative- the idea is simply for each group to discuss openly and honestly the differences they perceived. You may find that students naturally begin to discuss which traits tend to be typical of girls and boys. Do not shy away from this topic, but try to prevent students from relying on stereotypes.

LEARNING STYLES

Anyone who has ever studied psychology will testify that a enormous volume of work has been done in the exploration of learning styles. In fact, there are almost as many ways to describe learning styles as there are psychologists. Rather than attempting to review all of these, we will focus on the work of Isabel Briggs Myers and David A. Kolb. We have also included an annotated bibliography of additional sources for those who wish to pursue this topic further.

According to the work of Isabel Briggs Myers, people can be classified into "types" and each type is made up of four dimensions. Each dimension, in turn, is described a continuum: extroversion-introversion, sensing-intuition and judgement-perception. By taking a paper and pencil test, the Myers-Briggs Type Indicator (published by Educational Testing Service and available from Consulting Psychologists Press, 577 College Ave., Palo Alto, CA 94306), one can determine which of the 16 possible "people types" best describes them. Isabel Briggs Myers describes each of these types in her booklet Introduction to Type, which is also available from Consulting Psychologists Press. In his book People Types and Tiger Stripes a practical guide to learning styles (1989), Gordon Lawrence discusses the implications of these types for classroom education. Specifically, Lawrence explores the strengths and weaknesses of each type, and introduces various teaching and management styles that are particularly well suited to each type.

The Myers Briggs Type Indicator, however, must be administered by a professional psychologist. Although it is possible to estimate which type particular students are by carefully observing their behavior in different situations, the administrative red tape surrounding this diagnostic instrument make it impractical for use in the classroom. On the other hand, David A. Kolb has developed a one-page "Learning Style Inventory" which students can easily use to characterize their learning habits.

Kolb's inventory asks students to read a series of 12 statements, and for each one, rank the possible options given to complete the statement on a scale of 1 to 4, 4 being the option that is most like you and 1 being the option that is least like you. The options for the twelve statements are listed in four columns, so that by totaling the score for each column students can determine their score for what Kolb describes as the four stages of the learning cycle: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC) and active experimentation (AE). By subtracting the CE score from the AE score and the RO score from the AE score, a pair of coordinates can be generated, and these coordinates are then used to map each person into one of four quadrants of Kolb's Learning Style Type Grid. Kolb designates these four types Accommodator, Diverger, Converger and Assimilator. He then goes on to describe each of these types in more detail, including the natural skills and deficits inherent in each type.

We have found that using Kolb's Learning Styles Inventory as a follow-up to the group problem solving activity mentioned on p. 2 helps students of all ages identify what they are particularly good at and where their weaknesses lie. Many of them are amazed to discover how accurately these learning styles describe their personalities. Individually, students are able to identify what kinds of situations and concepts may be particularly challenging for them because the situation is not well suited to their learning style, and this realization often helps them find the patience necessary to struggle with these challenges. Rather than assuming that difficulty in mastering a concept is due to his/her own stupidity, a student that is familiar with his/her learning style can accept the difficulty as a natural part of the learning cycle that occurs when you are faced with a concept that does not mesh well with the way your mind works.

Students are also quick to see the implications of learning styles for group and cooperative activities. For example, once they have figured out

what type of learner they are, they realize that it is not necessarily productive to work in a group with people who have the same style, and they begin to actively seek out partners with different styles whose skills complement their own. Another benefit of groups that include students with different learning styles is that each member of the group feels that they have a particular strength to contribute, and those who lack that strength learn to appreciate it in their classmates. The overall result is that each student feels that they are valued by their classmates, but also that they can learn from each other.

A few class periods spent exploring gender roles and learning styles early in the year pays off several fold over the remaining months. Not only are students more attuned to particular patterns of behavior, where these patterns come from and what they mean, but they are also more actively aware of how their own minds work. This awareness enables students to directly and intentionally work on developing their intellectual flexibility, a quality that will be of great use to them well after their days in school have ended.

Annotated Bibliography

Briggs Myers, Isabel. (1980). Introduction to Type. Palo Alto, CA: Consulting Psychologists Press, Inc.
This is the original accompaniment to The Myers Briggs Type Indicator, and includes lengthy descriptions of each of the 16 personality types.

Kolb, David A. (1995) Organizational behavior xxvi. Englewood Cliffs,NJ: Prentice Hall.

Kolb, David A. (1991) The Organizational behavior reader xii. Englewood Cliffs, N.J: Prentice Hall

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Kolb, David A. (1984) Organizational psychology xxii. Englewood Cliffs, N.J: Prentice-Hall.

Kolb, David A. (1984) Organizational psychology xiv. Englewood Cliffs, N.J: Prentice-Hall.

Kolb, David A. (1984) Experiential learning xiii. Englewood Cliffs, N.J: Prentice-Hall.
All of these works by Kolb discuss his theories on learning styles and their implications for pedagogy.

Lawrence, Gordon. (1989). People Types and Tiger Stripes A practical guide to learning styles. Gainesville, FL: Center for Applications of Psychological Type, Inc.
Lawrence begins with Briggs Myers work, and applies it specifically to educational situations. This book is particularly helpful for teachers who are interested in tailoring their teaching style to the learning styles of their students.

Tannen, Deborah. (1990) You Just Don't Understand: Women and Men in Conversation. Ballantine Books.

Just one of Deborah Tannen's numerous studies of gender and communication, this book describes how communication styles between men and women differ. Tannen goes on to propose that these differing styles provide evidence that men and women see interpersonal relationships differently, and she also explores the implications of these ideas for personal and professional interactions between men and women.

Tannen, Deborah. "Teacher's Classroom Strategies Should Recognize that Men and Women Use Language Differently," *The Chronicle of Higher Education*, June 19, 1991.